

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number  
**WO 2005/007920 A3**

(51) International Patent Classification<sup>7</sup>: **B21D 39/03**,  
C23C 14/34

(21) International Application Number:  
PCT/US2004/022615

(22) International Filing Date: 13 July 2004 (13.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/487,094 14 July 2003 (14.07.2003) US  
60/527,917 8 December 2003 (08.12.2003) US

(71) Applicant (for all designated States except US): **TOSOH SMD, INC.** [US/US]; 3600 Gantz Road, Grove City, OH 43123 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BAILEY, Robert, S.** [US/US]; 1493 Trail Court, Grove City, OH 43123 (US).  
**HOLCOMB, Melvin, K.** [US/US]; 2205 Buttercup Lane, Grove City, OH 43123 (US).

(74) Agents: **ELLSWORTH, Jeffrey, S.** et al.; Wegman, Hessler & Vanderburg, 6055 Rockside Woods Boulevard, Suite 200, Cleveland, OH 44131 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

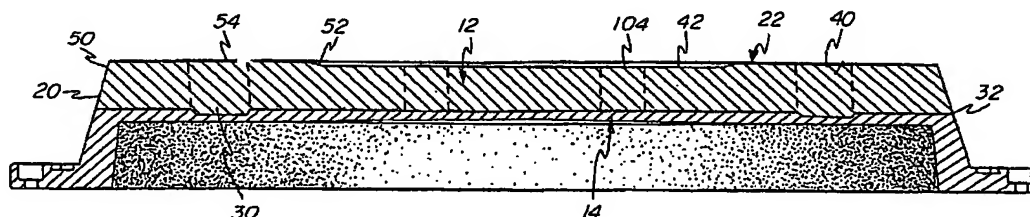
Published:

— with international search report

(88) Date of publication of the international search report:  
12 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SPUTTERING TARGET ASSEMBLY HAVING LOW CONDUCTIVITY BACKING PLATE AND METHOD OF MAKING SAME



(57) Abstract: A target and backing plate assembly (10) and method of making the same. The backing plate (14) is made of a material having an electrical conductivity less than or equal to 45 % IACS and is selected from the group consisting of Al alloys, Cu alloys, magnesium, magnesium alloys, molybdenum, molybdenum alloys, zinc, zinc alloys, nickel and nickel alloys. The target (12) is bonded to the backing plate (14).

WO 2005/007920 A3